SOUTH CAROLINA WATER QUALITY ASSOCIATION

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May 25, 2011

NPDES PERMITTING APPROACH FOR *E.COLI* IN FRESH WATER

The SC Water Quality Association comprises public water and sewer utilities statewide. We protect public health every day using state-of-the-art treatment facilities and the latest water and wastewater treatment technologies.

We fully support moving from the 1956 fecal coliform standard to the 1986 *E.coli* standard for fresh water statewide. The fecal coliform standard has been discredited as an indicator of swimmer illness while *E.coli* has been found to correlate directly to swimmer illness. Accordingly, the change in indicators is both necessary and appropriate in our view.

In addition to adopting instream *E.coli* standards, we also believe that DHEC should specify the implementation of that standard in terms of (1) ambient water quality compliance determinations (impaired or not impaired) and (2) for discharge permit effluent limitations.

Ambient Attainment Determinations. In terms of making ambient impairment decisions, we believe the monthly geometric mean is the appropriate benchmark for determining whether a water body is impaired.

NPDES Permit Limits. Regarding effluent limits in NPDES permits for continuous dischargers, we suggest the following approach:

- End of pipe compliance – no dilution
- 126 monthly geometric mean (as compared to 209 which EPA allows)
- A weekly limit rather than a daily maximum.

We note that the single sample maximums shown in EPA's criteria table have been misunderstood. EPA has unequivocally acknowledged this and clarified the intended application of the *E.coli* criteria.

"The 'single sample maximum' values allow beach managers to quantitatively determine what an unacceptably high value is. The 'single sample maximum' was never to [sic] intended to be a 'value not to be exceeded' when referring to attainment decisions and National Pollutant Discharge Elimination

System (NPDES) permitting under the Clean Water Act." (Implementation Guidance for Ambient Water Quality Criteria for Bacteria, November 2003 Draft).

EPA provided the following additional clarification:

"Other than in the beach notification and closure decision context, the geometric mean is the more relevant value for ensuring that appropriate actions are taken to protect and improve water quality because it is a more reliable measure, being less subject to random variation, and more directly linked to the underlying studies on which the 1986 bacteria criteria were based." (Water Quality Standards for Coastal and Great Lakes Recreation Waters; November 16, 2004; FR 04-25303).

While the geometric mean is protective of public health, particularly given that we propose that DHEC set it at 126 while EPA would allow it to be 209, we would support DHEC taking public comment on the following two additional NPDES permit options:

- 126 weekly geometric mean
  - Thus, not only will EPA's monthly geometric mean be met but no individual week will exceed the 126 as well. This approach would reflect three layers of additional stringency beyond what EPA's standards are based on. First, we propose the 126 geomean rather than the 209, which EPA would allow. Second, this approach would make compliance for point sources at the end-of-pipe rather than instream when EPA's standards were intended to apply instream (allowing the benefit of dilution which is given for most if not all other standards). Finally, the 126 weekly geometric mean is the third level of additional stringency. or;

- 409 weekly average
  - This level corresponds to lightly used full body contact recreation. Like the weekly geomean proposed above, this weekly average would provide a third layer (on top of 126 versus 209 and no dilution) of stringency beyond what EPA would approve as being fully protective.

Application of *E.coli* Approach to Enterococcus Limits. Finally, we urge DHEC to apply the final *E.coli* implementation approach (monthly/weekly) to NPDES permits for discharges of enterococcus to non-bathing beach marine waters.

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